

# CHAPTER 1

## GENERAL INFORMATION

### Section 1.1 Introduction

#### 1.1.1 GENERAL.

The Radar Data Acquisition (RDA) Group is composed of the hardware/software necessary to extract a sample of data from the surrounding atmosphere. The sample of data is obtained by rotating the antenna a full revolution at a predetermined elevation of the antenna related to the horizon, at a specified Pulse Width and at a predetermined Pulse Repetition Frequency (PRF). The antenna is then elevated to another elevation and rotated another full revolution. The Pulse Width, the PRF, and elevations are determined by the Volume Coverage Pattern (VCP). Currently, there are six VCPs that control the antenna's movements in intervals from +0.5° to +19.5° in elevation. The atmospheric information is processed into Base Data. Base Data is comprised of reflectivity, mean radial velocity, and spectrum width.

The operator can access the RDA by using the Master Human Computer Interface (HCI) hardware to command the RDA to perform functional operations. This is accomplished by the operator accessing the HCI via the KVM in the UD90/190 cabinet assembly. The site may also be controlled remotely, for example the Master System Control Function (MSCF) at the RPG or from a dial-in user via the Remote Access Server.

The operator performs five major functions using the HCI:

- Monitor system status/performance
- Inspect/update logs
- Communicate with RPG
- Inspect/update the system operational parameters
- System troubleshooting & diagnostics

#### 1.1.2 PURPOSE OF MANUAL.

The purpose of this manual is to provide the user with an overview of the RDA operation, instructions for observing status logs, and detailed instructions for performing diagnostic operations to test the subsystem.

#### 1.1.3 SCOPE OF MANUAL.

This manual provides the information and procedures to enable the user to exercise all capabilities and functions of the RDA Group equipment in support of a WSR-88D facility. It is divided into

nine chapters which are listed below:

- [Chapter 1](#) General Information
- [Chapter 2](#) RDA HCI Main Window
- [Chapter 3](#) Real Time Display
- [Chapter 4](#) Performance Data
- [Chapter 5](#) RDA Log Data
- [Chapter 6](#) Adaptation Data
- [Chapter 7](#) Console Message
- [Chapter 8](#) Radar System Test
- [Chapter 9](#) Backup/Restore

### 1.1.4 CONTENTS OF MANUAL.

The contents of this manual will include detailed information about the various windows, menu bars, buttons, alarms/status, diagnostics, calibrations, control procedures, and messages that are available for authorized users with the appropriate username/password.